Before the
Federal Communications Commission
Washington, D.C. 20554

In the Matter of	)	
Health Care Delivery Elements of the National Broadband Plan	)	**GN Dkt Nos. 09-47** **09-51** **09-137**
NBP Public Notice #17	)	**WC Docket No. 02-60**

COMMENTS OF SIEMENS ENTERPRISE COMMUNICATIONS, INC.

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Dated: December 4, 2009

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Siemens Enterprise Communications, Inc. ("SEC" or "Company"), acting with counsel and pursuant to Section 1.415(b) of the Federal Communications Commission's ("FCC" or "Commission") Rules, 47 C.F.R. § 1.415(b), hereby respectfully submits these comments in response to the Commission's Public Notice DA 09-2413, released November 12, 2009, on "Health Care Delivery Elements of National Broadband Plan", NBP Public Notice #17 (the "Notice").

I. INTRODUCTION

SEC fully concurs that "broad use of health IT has the potential to improve population health, expand access to affordable care, increase the efficiency of care provision, reduce unnecessary healthcare costs, prevent medical errors, increase administrative efficiencies and decrease paperwork."[1] The Company has devoted substantial resources to developing applications that seek to advance these goals. In adopting the National Broadband Plan, the Commission should encourage and provide

[1] Notice, at p.1.

maximum technological flexibility for the development and deployment of solutions that ensure that these desired health IT developments become realities.

II. SEC'S INTEREST IN THE ISSUES RELATED TO HEALTH CARE AND BROADBAND CAPABILITY

SEC is a joint venture between the Gores Group, LLC, a leading private equity investor in telecommunications and technology businesses, and Siemens A.G., a world-renowned developer and manufacturer of telecommunications technologies. The Company has embraced the potential of broadband communications to enrich the economic and social well-being of everyone through ubiquitous access to the Internet. SEC designs and develops value-laden, software-based enterprise communications applications and solutions that enable and exploit the full potential of broadband communications technology.

SEC's applications for unified and other communications over broadband platforms are directly relevant to and serve the goals and objectives of the National Broadband Plan (e.g., enhancing broadband access for education, health care, public safety). In the health care area, SEC applications can facilitate medical assistance by ensuring accessibility to the remote physician to all of the key specialists needed to make an informed decision about a patient's treatment. SEC applications also can provide secure access to electronic health records ("EHR") at the patient's bedside, thereby reducing costs, wait times and improving patient care and safety. Broadband policies that enable and encourage the use of such applications should be embodied in any National Broadband Plan.

III. DATA SECURITY AND ACCESS TO ELECTRONIC HEALTH RECORDS

The Notice raises several questions relating to data security in health IT and secure access to EHRs. Most specifically, the Commission seeks to "better understand the measures in place to ensure health data security, the potential for breaches and the network requirements to improve security."[2]

A. Major Security Challenges - SEC believes that the major security challenges regarding personal health information and ensuring health data security primarily relate to lax controls on data access such as the following factors:

- Use of multiple systems login identifications;
- Management of manual passwords;
- User abuse related to sharing of passwords;
- Improper disclosure and exposure of password lists;
- Weak password encryption rules; and
- Lengthy or lack of application time out parameters for gaining access.

B. Level Of Health Data Breaches – From SEC's perspective, poorly managed access privileges and the lack of robust security protocols, arising out of or reflected by the challenges outlined above, directly contribute to health data security breaches. Such breaches would include unidentified or inappropriate user access to patient clinical and financial data.

C. Network Demands Imposed By Security Efforts – SEC does not believe that health data security policies, appliances or applications impose significant additional demands on the network. Additionally, the implementation of applications such as Single

[2] Notice, at p. 5.

Sign On and Identity Management software applications developed by SEC exponentially increase the speed with which users can access appropriate applications, validate and permit authorized application. Furthermore, the enhanced access speed and bandwidth allocation makes the network more manageable and efficient.

D. Simplification Of The Means Of Obtaining Medical Information And Personal Health Information - Single Sign On and user authentication simplifies access and increases speed of access and verification/authorization for patients with the same benefits as clinicians.

E. Example Of Improving Secure and Rapid Patient And Clinical Access To Personal Health Information: Bedside Terminals - Improving patient care and patient safety are key goals every year for healthcare institutions. Increasing requirements to access EHRs at the patient's bedside to achieve these goals is accelerating bedside terminal deployments.

1. Benefits of Bedside Terminals Include Secure Access To EHRs - Bedside terminal solutions provide clinical staff with secure access to EHRs and can be used for patient education and even entertainment. The Intelligent and Distributed Computing Symposium ("IDC") whitepaper for EHRs and Bedside Terminals ("IDC Whitepaper") cites the following benefits of deploying such equipment:

Improved patient care and safety. Access to EHRs and other information sources (hospital manuals, guidelines, policies, drug profiles) help clinical staff to make informed decisions, improving patient safety.

Reduced wait times. Hospital staff's ability to quickly access EHRs and to communicate information electronically improves hospital workflow and ultimately helps to reduce wait times.

Reduced costs. A bedside terminal enables hospitals to consolidate a wide array of functionality into a single piece of integrated equipment (nurse call, telephone, TV, Internet, intranet and radio). Hospitals need not install and manage multiple systems but instead have a single interface through which they can access multiple applications. This facilitates improved access and simplified work processes, and ultimately reduces costs.

Improved clinical staff efficiency and satisfaction. Because patients are able to access a number of functions directly from the bedside terminal, there is an immediate reduction in the time clinical staff work on non-clinical tasks. For staff, benefits also include a reduction in the number of interruptions, noise levels, and wasted time moving from one task to another. Consequently, workflow is streamlined, stress levels are reduced, the working environment is improved and overall costs are reduced.

Improved patient satisfaction. Bedside terminals deliver significant benefits to patients. They provide ready access to education (such as tutorials patients can view in their own time), give hospitals the ability to easily conduct surveys, and give patients access to entertainment and the ability to order food and control their environment, resulting in improved patient satisfaction.

Addressing requirements to reduce the amount of equipment needed in a patient's room and offering flexibility to meet both patient and clinician access, the SEC bedside terminal applications include multiple integrated peripheral features that, among other things, help promote secure access, such as:

- Smart Card/RFID Reader
- Biometric Reader
- Swipe Card Reader
- VoIP/SIP Telephone
- Remote Control
- Barcode Scanner
- Wireless Keyboard
- Camera with sliding privacy door
- Wireless Connectivity
- Custom Membrane Keypad
- Ultrasonic Microphones

SEC's employment of biometric security ensures secure terminal logon for doctors, nurses and patients utilizing fingerprint recognition, which doesn't require a keyboard or password management.

Barcode scanners can be used to simplify data entry (e.g., patient medications and room relocations) and reduce recording errors, as well as confirm medicine distribution in real-time.

VoIP telephone reduces the infrastructure and vendor complexity by consolidating data and telephony onto a common network, which saves costs and decreases the number of service providers.

2. <u>Benefits To Clinical Staff</u> - An essential part of the EHR "infostructure" is the ability to give clinical staff ready access to clinical information, according to the recent IDC Whitepaper.

When doctors pull up X-rays and CT scans at the patient's bedside, they are able to deliver more informative consultations. A clearly displayed picture, along with an explanation, helps patients better understand their medical condition and treatment options. While with patients, doctors can read all patient records in real-time such as up-to-date drug dispensing logs. Bedside terminals may be used for medical charting, eliminating messages on grease boards and hard-to-read notes.

Clinical access to EHR and other health information system ("HIS") applications is achievable and enabled with SEC Single Sign On software and smart cards. Clinicians can have easy – yet much more secure – access to medical applications, and don't have to remember multiple user names and passwords. Nurses can effectively perform bedside documentation and have greater time to spend in patient care, versus struggling with technology.

This ability to make technology transparent to clinicians enables them to do their jobs easier, provide better care to patients and for IT, reduces calls to the help desk for forgotten passwords, centralizes management across applications and delivers an improved audit trail to conform to HIPAA and other regulatory requirements.

3. **Patient Education** - Patients can learn about their medical conditions, recommended treatment options, and post-operative regimens using SEC Patient Education solution. The system uses broadcast quality, full motion video and animated graphics to explain complicated medical conditions and procedures in a highly understandable and engaging format targeted to people with a 6^{th}- to 8^{th}-grade education. Its rich format, interactivity and scripting have proven to be highly effective in improving patient comprehension and retention.

Patient Education Features:

- An engaging interactive audio/visual education system that uses video narration, animation and clinical imagery to explain, in lay-person's terms, a patient's condition and treatment.
- Content authored and reviewed by physicians/clinicians from the nation's leading institutions.
- A database-driven library of instructional segments that allows providers to tailor specific segments to the needs of individual patients.
- The ability to integrate existing hospital patient education information.
- An interactive delivery system that tracks usage, compliance and understanding.
- A flexible technology platform that can be used in a hospital, physician's office or a patient's home.

Content can be delivered on any video-based or interactive television system including bedside computers, tablet PCs, kiosks. Even DVDs. What's more, Patient Edu software can read HL-7/ADT feeds and can be integrated with all major EMR systems.

Benefits of Patient Education:

 # 1 – Improve Quality of Care

- "Patients who have a clear understanding of their after-hospital care instructions are 30% less likely to be readmitted" (AHRQ – Feb '09) ***Agency for Healthcare Research and Quality***

 # 2 – Elevate Patient Satisfaction

- Real-time survey and issue resolution; post-discharge follow-up.

 # 3 – Enhance Compliance and Risk Management

- Reporting, Discharge information and informed consent features are available through the Patient EDU Solution. Meets HiTech Act requirements.

 # 4 – Increase Nursing capacity and performance

- Smooth integration to nursing work-flow results in maximum utilization and maximum benefit to the facility.
- Through integration with OpenScape, messages and information can be pushed (patient-to-nurse, nurse-to-nurse, etc.) – eliminating the necessity for nursing staff to go to a task list to look up open tasks.
- Automated education process releases nursing time for other clinical tasks.

IV. CONCLUSION

In summary, in SEC's experience, major health data security challenges are generated by failure to adequately secure passwords and other access keys. These failures are often the causes of health data breaches. The imposition of security policies, appliances and applications do not impose significant additional demands.

There are applications such as SEC's Single Sign On and Identity Management software that increase the speed of and simplify secure access to health care information. SEC also provides bedside terminal solutions that deliver many advantages such as improved workflow, secure and easier clinical access to EHRs and the ability to do both clinical access and patient services with the same device. Improved patient care, safety, and satisfaction objectives can be achieved; staff efficiency, work flow improvements and significant cost reduction in the delivery of care can be realized. Finally, SEC

respectfully submits that these and other SEC health IT solutions designed to operate on broadband platforms truly are among the "promising ways to use broadband and other advanced communications to promote better health outcomes and more efficient delivery of care."[3] The National Broadband Plan should fully support the further development of these and comparable broadband-based technologies which effectively and efficiently further the Congressional purpose of using "broadband infrastructure and services in advancing health care delivery."[4]

Respectfully submitted,

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[3] Notice, at p. 1.

[4] American Recovery and Reinvestment Act of 2009, Pub. L. No. 111-5, §6001(k)(2)(D), 123 Stat. 115 (2009).